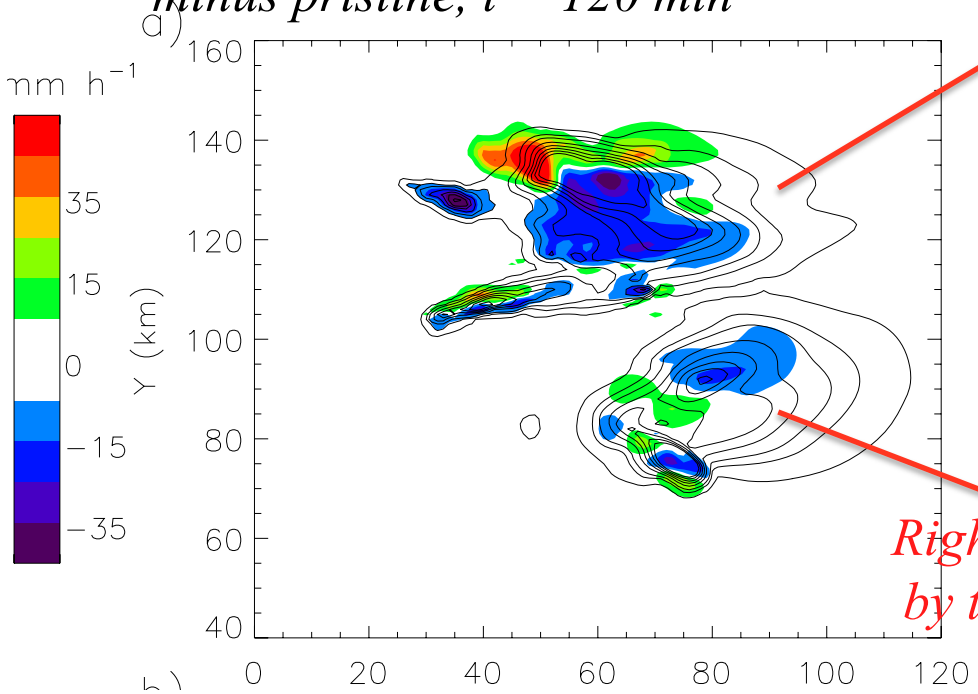
2 hr WRF supercell simulations, dx = 1 km

Change in surface precipitation, polluted minus pristine, t = 120 min



Left-moving "bow echo" dominated by cold pool-shear interactions

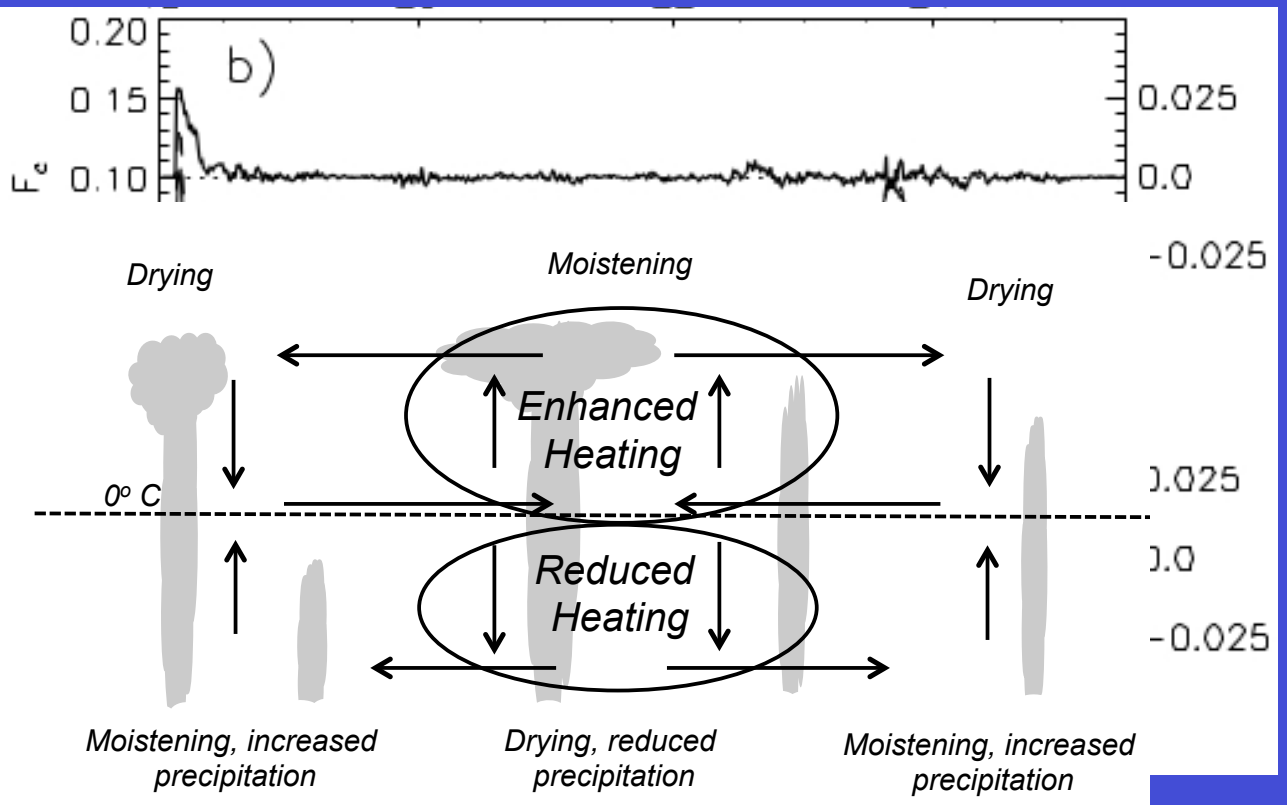
Morrison (2012)

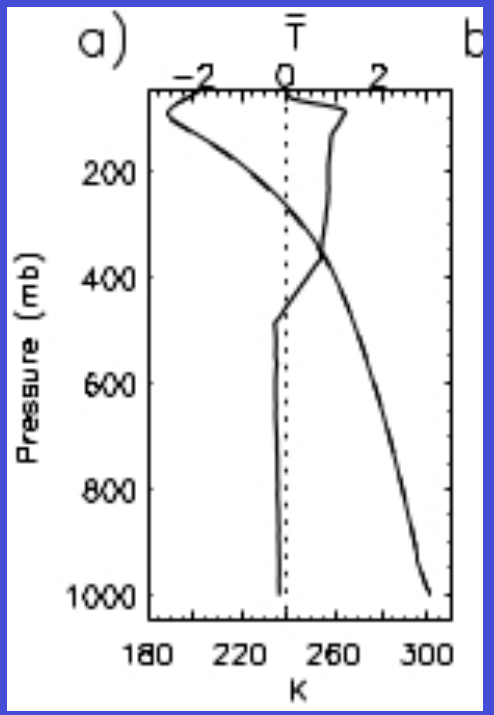
Right-moving mesocyclone dominated by tilting/stretching of environmental shear

7.5 day "CRM" simulations of TWP-ICE to investigate multi-scale aspects of aerosol impacts on deep convection

- **Heating is applied locally in updrafts and cooling in downdrafts to mimic the aerosol invigoration effect on deep convection.**

- **Main conclusion:** ***the aerosol invigoration effect on convection is intimately coupled with larger-scale dynamics through a 2-way feedback.***





Morrison and Grabowski (2013)